

IN THE CLAIMS:

1. (Currently Amended) A time-switched preamble generator for use with a multiple-input, multiple-output (MIMO) transmitter employing first and second transmit antennas, comprising:

an initial preamble formatter configured to provide a first preamble to said first transmit antenna and a second preamble to said second transmit antenna during an initial time interval;
and

a subsequent preamble formatter coupled to said initial preamble formatter and configured to provide said second preamble to said first transmit antenna and said first preamble to said second transmit antenna during a subsequent time interval; and

wherein at least one of said first preamble and said second preamble employs a complete training sequence.

2. (Currently Amended) The generator as recited in Claim 1 wherein said first preamble employs said complete [a] training sequence and said second preamble employs a null.

3. (Currently Amended) The generator as recited in Claim 2 wherein said complete training sequence occurs during said null.

4. (Original) The generator as recited in Claim 2 wherein said null is selected from the group consisting of:

a null sequence;

a zero function; and

an un-modulated transmission.

5. (Currently Amended) The generator as recited in Claim 1 wherein said first preamble employs a complete first training sequence and said second preamble employs a complete second training sequence orthogonal to said complete first training sequence.

6. (Currently Amended) The generator as recited in Claim 5 wherein said complete first training sequence employs a subset of tones and said complete second training sequence employs a remaining subset of tones.

7. (Original) The generator as recited in Claim 1 wherein at least one of said first and second preambles employs a guard interval.

8. (Original) The generator as recited in Claim 1 wherein said initial and subsequent time intervals are contiguous.

9. (Currently Amended) A method of generating a time-switched preamble for use with a multiple-input, multiple-output (MIMO) transmitter employing first and second transmit antennas, comprising:

providing a first preamble to said first transmit antenna and a second preamble to said second transmit antenna during an initial time interval; ~~and~~

further providing said second preamble to said first transmit antenna and said first preamble to said second transmit antenna during a subsequent time interval; and

wherein at least one of said first preamble and said second preamble employs a complete training sequence.

10. (Currently Amended) The method as recited in Claim 9 wherein said first preamble field employs said complete [a] training sequence and said second preamble field employs a null.

11. (Currently Amended) The method as recited in Claim 10 wherein said complete training sequence occurs during said null.

12. (Original) The method as recited in Claim 10 wherein said null is selected from the group consisting of:

a null sequence;

a zero function; and

an un-modulated transmission.

13. (Currently Amended) The method as recited in Claim 9 wherein said first preamble employs a complete first training sequence and said second preamble employs a complete second training sequence orthogonal to said complete first training sequence.

14. (Currently Amended) The method as recited in Claim 13 wherein said complete first training sequence employs a subset of tones and said complete second training sequence employs a remaining subset of tones.

15. (Original) The method as recited in Claim 9 wherein at least one of said first and second preambles employs a guard interval.

16. (Original) The method as recited in Claim 9 wherein said initial and subsequent time intervals are contiguous.

17. (Currently Amended) A multiple-input, multiple-output (MIMO) communication system, comprising:

first and second transmitters employing first and second transmit antennas, respectively;
a time-switched preamble generator coupled to said first and second transmitters,
including:

an initial preamble formatter that provides a first preamble to said first transmit antenna and a second preamble to said second transmit antenna during an initial time

interval, and

a subsequent preamble formatter coupled to said initial preamble formatter that provides said second preamble to said first transmit antenna and said first preamble to said second transmit antenna during a subsequent time interval; and

wherein at least one of said first preamble and second preamble employs an undivided training sequence; and

first and second receivers, associated with said first and second transmitters, that employ first and second receive antennas, respectively.

18. (Currently Amended) The system as recited in Claim 17 wherein said first preamble employs said undivided [a] training sequence and said second preamble employs a null.

19. (Currently Amended) The system as recited in Claim 18 wherein said undivided training sequence occurs during said null.

20. (Original) The system as recited in Claim 18 wherein said null is selected from the group consisting of:

a null sequence;

a zero function; and

an un-modulated transmission.

21. (Currently Amended) The system as recited in Claim 17 wherein said first preamble employs an undivided [a] first training sequence and said second preamble employs an undivided [a] second training sequence orthogonal to said undivided first training sequence.

22. (Currently Amended) The system as recited in Claim 21 wherein said undivided first training sequence employs a subset of tones and said undivided second training sequence employs a remaining subset of tones.

23. (Original) The system as recited in Claim 17 wherein at least one of said first and second preambles employs a guard interval.

24. (Original) The system as recited in Claim 17 wherein said initial and subsequent time intervals are contiguous.